

protonated tri- protonated n-propylamine, protonated tri-n-butylamine, protonated tri-n-hexylamine or, protonated dimethylalkylamine.

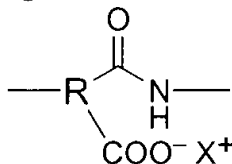
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corr.

8. (Once amended) A polyimide fluid separation membrane wherein the polyimide membrane is a composite membrane formed by the following process: a) forming a coating solution of a polyamic acid salt polymer in a solvent system that contains from 0.01% to 20 % by volume of tertiary amine or water; b) applying said coating solution to a porous substrate to form a coated substrate; c) solidifying said coating solution by drying or by immersing said coated substrate into a non solvent; d) converting said coated substrate having the solidified coating into a final polyimide composite membrane by thermal or chemical treatment.

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11. (Once amended) The process of claim 8 wherein said porous substrate is formed from polysulfone, polyimide, polyamide, polyolefin, or polyether imide.

15. (Once amended) A polyimide article formed from a polyamic acid salt precursor article by thermal imidization, wherein said polyamic acid salt precursor article is formed from a casting solution containing a catalyst, and said polyamic acid salt precursor contains the following radicals:



wherein R is a substituted or unsubstituted aromatic, alicyclic, heterocyclic, or aliphatic radical; and

X is an ammonium ion, a phosphonium ion, a sulfonium ion, a protonated tertiary amine or a quaternary amine or a mixture thereof.

18. (Once amended) The polyimide fluid separation membrane of claim 16 wherein the temperature of said thermal imidization is between 100 to 200 degrees Centigrade.

24. (Once amended) The polyimide membrane of claim 23 wherein said inert solvent is hexane, cyclohexane, octane, pentane, ethyl ether, propyl ether, butyl ether, methyl t-butyl ether, petroleum ether, perfluorinated alkanes, perfluorinated alkyl ether, acetone or methyl ethyl ketone.

25. (Once amended) The polyimide membrane of claim 23 wherein said diluted dehydration agent is an acid anhydride, acid chloride or an acetal.

28. (Once amended) The fluid separation membrane of claim 23 wherein X is a protonated tertiary amine, tetraalkylammonium or ammonia.